the botanists of the California Geological Survey (1861-1870) are largely silent on these matters of alien weeds. Of course it is possible, though not so probable, that the filaree was introduced by some Spanish voyager at an earlier date than the Mission settlements. A decisive conclusion doubtless, is not now possible. As to the use of the filaree by the native tribes, these tribesmen knew better the plants that grew about them, from the standpoint of their tribal needs in food, medicine, implements, fibre and folk rituals, than any white man has ever known them. It is certain that the Indian would have no difficulty in making use of filaree on his own initiative. It is not likely that any white man could ever instruct a tribesman regarding the economic native plants from the standpoint of the tribesman's daily necessities. In his own special field the Indian was an expert.—W. L. Jepson.

Artificial Vegetative Propagation of Redwood

My method for vegetative propagation of redwood (Sequoia sempervirens) is as follows. Cut away all suckers not well covered by soil. On the remaining suckers cut a wide notch about three-fourths through at the point of contact with parent root or bole. Pack with damp soil and stake. If the notch is too narrow it will heal over and not produce roots. Keep well watered and in a year's time there will be roots. But it is well to wait two or three years before the final cut from the parent bole. Then select suckers having the individual root system well started. Dig a hole wide and deep enough not to injure the terminals of the sucker's roots and with a saw cut away your plant. Wrap roots in wet burlap or some substitute at once. Suckers from one to two and one-half feet high are preferable. Plant them in good soil liberally mixed with humus. I recommend that they be planted in five gallon cans with holes punctured in bottom. It is advisable to keep them in a protected spot in partial shade and continuously damp. In this way they can be kept in cans until they are six or eight feet high. When planting in permanent place remove cans by cutting away with shears and keep well watered until firmly established. Use stakes with the crooked or leaning plants.—H. A. Greene, Monterey, California.

NOTES AND NEWS

The California Botanical Society held a meeting on March 16, 1933 at 8:00 p. m. in Room 460, Physiology Building, Stanford University, Palo Alto. Dr. George J. Peirce, the president, occupied the chair. The first speaker, Mr. S. B. Show, Regional Forester of the United States Forest Service, discussed "Problems in Forestry as Applied Botany". Mr. Show pointed out some of the complexities of the problem confronting the manager of the state's most extensive farming operations. He must protect his millions of acres from attacks of insects and fungi, from overgrazing, fire and erosion. He must consider the conflicting interests of various groups of forest-

users. Especially in harvesting the timber crop for commercial use care must be taken to preserve the aesthetic value of the forest for vacationists and nature lovers. This discussion was followed by a lecture on "The Greatest Forest in the World" by Ynes Mexia. In the course of her botanical collecting Mrs. Mexia navigated the Amazon by steamer, canoe and raft. Her graphic account of the great rainforest of South America, which is only to be traversed by water ways, was illustrated by excellent views taken en route. Sixty-one members and guests attended the meeting, the first to be held at Stanford.—E. K. Crum.

The Western Society of Naturalists held its Fifth Winter Meeting at the Hopkins Marine Station, Pacific Grove, California, December 20-22, 1932. A feature of particular interest to botanists as well as zoologists was the "Symposium on Methods in Taxonomy" that occupied the first two sessions of the meeting. Seven members of the California Botanical Society were among the fourteen speakers. The topics in this symposium in most cases were presented both from the botanical and zoological points of view. Topics and speakers included: 1. Introduction: fundamentals, aims, and methods.—LeRoy Abrams and E. B. Babcock. 2. Comparative morphology as the basis of taxonomy: value and limitations.—C. C. Epling and G. F. Ferris. 3. Geographical distribution as an aid in taxonomy.—J. T. Howell and A. H. Miller. 4. Paleontological problems and methods in taxonomy.—H. L. Mason and L. H. Miller. 5. Cytology as an aid in taxonomy.—C. D. Darlington. 6. Genetics as an aid in taxonomy.—Jens Clausen and F. B. Sumner. 7. Experimental taxonomy: stability and modifiability of plant forms.—David D. Keck. 8. The problem of racial differentiation and its bearing on taxonomy.—Th. Dobzhansky. 9. Plant relationships suggested by the morphology and apparent atopic similarity of pollens from the Order Chenopodiales.—H. E. McMinn.—D. D. Keck.

John Wynne Gillespie, one of the professional botanists of the Pacific Coast, a young man of great promise, died September 13, 1932. He received the Ph. D. degree from Stanford University in 1930 for a dissertation entitled "The Sympetalae of Fiji." Dr. Gillespie had traveled to the Fiji Islands as a Fellow of the Bishop Museum and published several critical papers on that flora. He spent a year at the Gray Herbarium of Harvard University as a National Research Fellow, studying historical material from the Fiji flora, and during the summer of 1932 pursued these studies further at the Kew Herbarium. Shortly before his death, Dr. Gillespie had been appointed Professor of Botany at the Arizona State Teachers College at Tempe. He was well known in California where he had done considerable field work in collaboration with his wife, Doris Kildale Gillespie. Mrs. Gillespie, a collector of plants from little known portions of northwestern California, and a contributor to this journal, has taken over the teaching position at Tempe.—D. D. Keck.

Professor LeRoy Abrams, curator of the Dudley Herbarium of Stanford University, sailed from San Francisco for Italy, via the Panama Canal, early in March, 1933. He plans to study in various European botanical centers until September. Dr. Abrams chose to visit southern Europe first and travel northward with the spring, thus permitting a perspection of the European flora at the most favorable season. On Dr. Abrams' itinerary are several of the largest European herbaria at which he proposes to study types and other critical specimens from the Pacific Coast to facilitate the preparation of the remaining volumes of his "Illustrated Flora of the Pacific States."—D. D. Keck.

Dr. Ira L. Wiggins, of the Dudley Herbarium of Stanford University, left in the latter part of February, 1933, for Tucson, Arizona, to join Dr. Forrest Shreve, of the Desert Laboratory, Carnegie Institution of Washington, on a trip of botanical exploration into northwestern Mexico. This is the third of a series of cooperative trips arranged between the staffs of the Desert Laboratory and the Dudley Herbarium to make phytogeographic studies in this region, most interesting botanically. Dr. Wiggins is on his second trip to this area with Dr. Shreve, Dr. L. R. Abrams having represented the Dudley Herbarium on the first excursion.—D. D. Keck.

The Sixth International Congress of Genetics, held at Cornell University in August, 1932, gave opportunity for two prominent European botanists to visit California botanical institutions. Dr. Ö. Winge, cyto-geneticist from the Royal Veterinary and Agricultural College, Copenhagen, and Dr. C. D. Darlington, cytologist from John Innes Horticultural Institution, London, visited this state during the fall. Dr. Winge accompanied Dr. J. Clausen and Mr. W. M. Heusi, of the Carnegie Institution of Washington, on a seed-collecting trip into the mountains of northern California. Dr. Darlington has established a winter residence at the California Institute of Technology, where he is continuing his cytological studies.—D. D. Keck.

Dr. W. W. Robbins, head of the Division of Botany at the Davis Branch of the College of Agriculture of the University of California, is spending six months in Europe where he is continuing his investigations on sugar beets, weeds and seeds.

All Californians will welcome the addition of valuable lands to the western boundary of Yosemite National Park. The latest such addition comprises approximately 8,785 acres along the scenic Wawona Highway and will bring that road entirely within the limits of the park for the first time. Previously, the road ran for some distance between the Mariposa Grove and Yosemite Valley outside of the park boundaries. President Hoover signed a proclamation on August 13, 1932, authorizing the addition. It is particularly significant to botanists as a measure that will afford protection to additional highly scenic pine forests.—D. D. Keck.